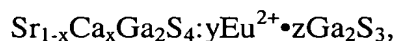


What is claimed:

1. A strontium calcium thiogallate phosphor doped with divalent europium, and having the following formula:



where x is 0.0001 to 1, y is a value defining sufficient Eu^{2+} to provide luminescent emission, and z is 0.0001 to 0.2 based on the mole amount of $\text{Sr}_{1-x}\text{Ca}_x\text{Ga}_2\text{S}_4:y\text{Eu}^{2+}$.

2. The phosphor of claim 1, wherein z is 0.001 to 0.2.
3. The phosphor of claim 1, wherein z is 0.001 to 0.1.
4. The phosphor of claim 1, wherein y is 0.001 to 0.1 based on the mole amount of $\text{Sr}_{1-x}\text{Ca}_x\text{Ga}_2\text{S}_4$.
5. The phosphor of claim 4, wherein y is 0.01 to 0.08
6. The phosphor of claim 4, wherein y is 0.01 to 0.04.
7. The phosphor of claim 1, wherein the phosphor has an emission peak of 535 nm to 560 nm.
8. The phosphor of claim 7, wherein the emission peak has a bandwidth of 50 nm or less under excitation with an emission source at $440 \text{ nm} \pm 40 \text{ nm}$.